

REMARKS

Claims 1-12 are pending in the application. The status of these claims is as follows:

| Claims / Section | 35 U.S.C. Sec. | References / Notes |
|------------------|--|---|
| Drawings | Objection | <ul style="list-style-type: none">• Failure to show embodiment |
| Specification | Objection | <ul style="list-style-type: none">• Failure to teach "native signal" |
| 11, 12 | §112, first paragraph, written description | <ul style="list-style-type: none">• No description for "native signal" |
| 1-11 | §112, second paragraph, indefiniteness | <ul style="list-style-type: none">• Lack of distinction between "a signal" and "electrical signal" |
| 8 | §112, second paragraph, indefiniteness | <ul style="list-style-type: none">• Duplicate claimed elements |
| 1-7, 9 & 10 | §102(b) anticipation | <ul style="list-style-type: none">• Alexandrescu (U.S. Patent No. 5,909,497). |
| 8 & 11-12 | §103(a) obviousness | <ul style="list-style-type: none">• Alexandrescu (U.S. Patent No. 5,909,497), and applicant's specification |

5 Applicants thank the Examiner for the non-finality of the Office Action.

Applicants have amended the drawings and appertaining description in the Specification to address the Examiner's objections and rejections, amended claims 1, 3-5, 7-12, canceled claim 2, and provided discussion below for distinguishing the present invention, with claims as amended, from the art cited

10 against it. No new matter has been added to the application by these amendments.

Applicants' use of reference characters below is for illustrative purposes only and is not intended to be limiting in nature unless explicitly indicated.

OBJECTION TO THE DRAWINGS

1. *Applicants have correctly labeled Figure 1, and have added Figure 2 to include the embodiment referenced by the Examiner.*

In the OA, on p. 2, the Examiner objected to the drawings as failing to
5 show the embodiment referenced in paragraph [0014] of the Specification.

Paragraph [0014] discloses a frequency adjustment mechanism that can be utilized by the invention. Therefore, Figure 2 has been added that clearly shows this referenced embodiment. Appertaining description related to Figure 2 has been added to the Specification, however, this added description does not
10 introduce new matter.

Based on the amendments, the Applicants respectfully request that the objection to the drawings be withdrawn.

OBJECTION TO THE SPECIFICATION

2. *As described below, claims 11 and 12 have been amended to refer to
15 a "characteristic" signal, as opposed to a "native" signal.*

In the OA, on p. 3, the Examiner objected to the Specification as failing to provide proper antecedent basis for the claims subject matter of a "native" signal as claimed in claims 11, 12.

In the table following paragraph [0008], a number of signal frequencies
20 are presented according to various world television standards. In paragraph [0012], the term "characteristic" frequency is used to define such signals. Applicants use of the term "native" was intended to refer to these "characteristic" frequencies—therefore, claims 11 and 12 have been amended to use the word

“characteristic” in place of “native” so that it is consistent with the term used in the Specification. The replacement of the term so that it is consistent with the Specification is in no way intended to change the scope of this claimed element and simply reflects an arbitrary choice of words.

5 Based on the amendments, the Applicants respectfully request that the objection to the specification be withdrawn.

35 U.S.C. §112, FIRST PARAGRAPH, CLAIMS 11 & 12 LACK OF ENABLEMENT

3. *Applicants have amended claims 11 and 12 to refer to a “characteristic signal” as opposed to a “native signal”.*

10 In the OA, on p. 3, the Examiner rejected claims 11 and 12 as not being enabled by the Specification since the Specification fails to teach a native signal of a screen device.

Applicants reiterate what was stated above under numbered paragraph 2, namely that the term “native” was replaced with “characteristic” in these claims to
15 be consistent with the Specification. Paragraphs [0008] (including the table) and [0012] provide support for the claim language referring to a characteristic signal.

Based on the claim amendments, the Applicants respectfully request that the 35 U.S.C. §112, first paragraph rejection be withdrawn.

35 U.S.C. §112, SECOND PARAGRAPH, CLAIMS 1-11 INDEFINITENESS

20 4. *Applicants have amended the independent claims to clarify the distinction between “a signal” and “an electrical signal”.*

In the OA, on pp. 3-4, the Examiner rejected claims 1-11 as failing to distinguish between “a signal” and “electrical signal”. The Examiner indicated

that these are taught as being two separate entities, whereas the drawings teach that these terms have the same meaning. The Examiner then indicated that it is not understood whether the applicant intended for the detector to receive a signal that is distinct and dissimilar to the signal received by the input device.

5 Applicants have amended the claims to distinguish: 1) the "line" signal (related to a line scanning frequency of a display), or more broadly (claims 11 and 12) the "characteristic" signal (which can be any signal associated with a standard for operating the screen device), from 2) the electrical signal that is processed by the signal processing unit. However, the distinction for the
10 purposes of clarifying the scope of the claim do not necessarily mean that these signals are physically or acoustically separated outside of the hearing device. Paragraph [0009] of the Specification indicates that the line signal may, in fact, be an audible/acoustic signal and therefore could be a part of the input signal (as shown in Figure 1), although paragraph [0010] indicates that the line signal may
15 be an electromagnetic signal as well (in which case, it would not be a part of the acoustic signal). All the claims require is that a transduced electrical signal that is processed be present, and a line or characteristic signal indicative of a screen device is also present and is detected that in some way affects how the transduced electrical signal is processed. There is nothing in the claim that
20 requires these signals to be either physically separate or together.

5. Applicants have amended claim 8 to correct the error introduced by the previous amendment.

In the OA, on p. 4, the Examiner correctly assumed that a typographical error was present when noting that claim 8, as amended, would include two of

each element. Therefore, Applicants have amended claim 8 to correctly make it an independent claim, as previously intended.

Based on the amendments and above explanation, Applicants respectfully request that the Examiner withdraw the 35 U.S.C. §112 rejections from the
5 present application.

35 U.S.C. §102(b), CLAIMS 1-7, 9 & 10 ANTICIPATION BY ALEXANDRESCU

*6. Alexandrescu fails to teach or suggest the detection of a line signal output by the screen device and adaptation to a different auditory situation dependent on the line signal. Alexandrescu, rather, teaches detection of
10 information encoded into the signal and adaptation therefrom.*

In the OA on pp. 4-5, the Examiner repeated the rejection made in the previous Office Action as to how Alexandrescu anticipates the elements of the above-identified claims. However, on p. 7, in the section labeled "Response to Arguments", the Examiner stated:

15 Since the applicant's claim language does not stipulate what kind of signal must be outputted from the television and used to adjust the hearing aid parameter, then the Alexandrescu reference applies.

Applicants have amended the independent claims to clarify that a line
20 signal output from the display (defined in the Specification as a signal related to the scanning lines of a display device) is the kind of signal being outputted, and therefore distinguishes this signal from the content-based signal output as disclosed by Alexandrescu.

Applicants repeat the arguments made previously (slightly modified)
25 below.

The present invention concerns a hearing device which can be adapted to different auditory situations via various auditory programs. The hearing device accomplishes this by reliably and automatically recognizing the auditory situation "television" or "screen device" and reliably, automatically switching into the

5 corresponding auditory program in this auditory situation. Accordingly, one of the signals emitted by the screen device, which actually represents an electromagnetic interference signal, is detected by the appertaining hearing device, and from this the proximity to an activated screen device can be reliably determined.

10 In the OA, on p. 2, the Examiner stated that Alexandrescu teaches, among other things:

15 a detector (col. 8 lines 5-18) for detecting a signal output by a screen device (col. 8 lines 5-8); a signal processing unit (5) configured to process and amplify the electrical signal, the signal processing unit being adaptable to different auditory situation[s] by at least one adjustable parameter (col. 8 lines 10-18) that can be automatically adjusted dependent on the signal;...

Applicants respectfully traverse this rejection on the grounds that

20 Alexandrescu does not teach the detection of a line signal output by the screen device, and adjustment of the hearing device that is dependent upon the line signal, but rather teaches the detection of information that has been encoded into the signal, and the adjustment that takes place is dependent upon this encoded information, and not the signal itself or an inherent attribute thereof.

25 Alexandrescu states, in pertinent part (8/5-18):

Another manner of programming the hearing instrument according to the invention would be to use

5 a television signal, particularly one that is used for
closed-captioning of television broadcasts. In this
manner, the appropriate parameters or program for a
television broadcast would be encoded into the
television signal. Thus, for example, if the particular
broadcast includes a loud noise, such as an
explosion, the television signal includes, shortly
before the explosion, program codes to modify the
response parameters of the hearing instrument for
10 this loud noise. Thus, the program codes are
appropriately decoded to form part of the audio or
electromagnetic signal for the hearing instrument and
the hearing instrument is appropriately programmed
for the upcoming loud noise, so as to minimize the
15 discomfort a user may feel.

The fact that the device of Alexandrescu operates upon information that
has been expressly encoded for the device is not a trivial distinction.

Alexandrescu deals with adjusting a hearing device in a particular manner
20 to an acoustic signal emitted by a television. This is achieved in that additional
information that can be used for the adjustment of hearing devices is added to a
television signal transmitted from a television emitter to the television. For
example, Alexandrescu teaches that information is encoded into the television
signal that indicates an explosion follows. The hearing device can then be pre-
25 adjusted corresponding to this event. This procedure entails an enormous effort
to embed and encode the required information. All films or transmissions would
have to be checked for the purpose of determining whether critical acoustic
situations for the hearing device user arise so that, in such cases, a type of
“advance warning” for the hearing devices can be emitted. Both the television
30 and the hearing device industry would have to agree on corresponding

transmission standards so that a large number of users could make use of the specified possibility.

Furthermore, Alexandrescu assumes that the hearing device user with his hearing device is already located in front of the activated television and the
5 hearing device is already operated in a corresponding mode to receive the encoded signals. Only in this case does it make sense when the corresponding hearing device makes use of the auxiliary function specified in Alexandrescu. How the appertaining hearing device arrives at the "television" mode in Alexandrescu (manually or automatically) remains completely undisclosed in
10 Alexandrescu. Alexandrescu presumes the very presence of the thing that the present invention seeks to detect.

For these reasons, Applicants assert that the amended claim language and above arguments clearly distinguish over the prior art, and respectfully request that the Examiner withdraw the §102(b) rejection from the present
15 application.

35 U.S.C. §103(a), CLAIMS 8, 11 AND 12 BY ALEXANDRESCU AND APPLICANTS' SPECIFICATION

7. Alexandrescu's content-based signal analysis does not obviate the property or characteristic-based signal analysis of the present invention.

20 In the OA, on p. 6, the Examiner indicates that claims 8, 11 and 12 are obvious over the combination of Alexandrescu and the admitted prior art according to the Applicants' Specification. The Examiner noted that Alexandrescu does not teach that the signal is a line signal and that an automatic adjustment of the parameter ensues when the line signal frequency is 15.625

kHz or 15.734 kHz, but notes that since these frequencies are well-known world standards for television devices, and it is known to use a line signal frequency for a television, then it would have been obvious to one of ordinary skill in the art to implement any of the known world standards for use in the device along a line
5 signal in the invention of Alexandrescu to minimize the need for additional programming algorithms to compensate for deviation from the normal and widely accepted standards.

Applicants respectfully assert that while it may be obvious to use a world standard pertaining to a display device in a particular display, it is not obvious to
10 use a display standard as a criteria for detection and adjustment of a hearing device regardless of how well known such a standard is. As noted previously, Alexandrescu presumes the very presence of the thing that the present invention seeks to detect. Alexandrescu's operations revolve around content-based signal information, whereas the present invention relates to characteristic-based signal
15 information. The present invention performs a different operation in the mere presence of such characteristic-based signal information, which is beyond the capability of the system disclosed by Alexandrescu. This distinction is non-obvious to those of skill in the art. The present invention operates in the environment of an activated display device and, although operates very
20 specifically, does so in a relatively uncomplicated manner that cannot be determined from the cited prior art.


For these reasons, Applicants assert that the amended claim language and the above arguments clearly distinguish over the prior art, and respectfully

request that the Examiner withdraw the §103(a) rejection from the present application.

CONCLUSION


Inasmuch as each of the objections have been overcome by the amendments, and all of the Examiner's suggestions and requirements have been satisfied, it is respectfully requested that the present application be reconsidered, the rejections be withdrawn and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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**APPENDIX
DRAWING CHANGES**